

REMARKS/ARGUMENTS

The applicant's attorneys appreciate the Examiner's thorough search and remarks.

Claims 1 and 13 have been amended to include a termination with at least the following features:

- (a) a termination trench the same depth as trenches of the active region;
- (b) the termination sidewall being adjacent a mesa of only one conductivity;
- (c) the contact being electrically connected to a surface of the electrode in the termination region opposite the sidewall of the termination region;
- (d) the oxide on the sidewall of the termination being the same thickness as the oxide on the sidewalls of the trenches in the active region.

Features (a) - (d) are not shown or suggested in the prior art.

Feature (a) allows for the fabrication of the termination trench and the active trenches in the same step, thereby simplifying the fabrication process. The termination trench in Hijzen is deeper, requiring a separate step.

Hijzen requires a PN junction 40 in the mesa adjacent the termination region, thus requiring additional masking, implanting, and diffusion steps, which further complicate the device and its fabrication process.

Hijzen shows the contact making electrical contact to a top portion of an electrode in the termination region (see Fig. 4), and then covering the remaining portion with an oxide. First, the structure shown by Hijzen is more complex to manufacture. Second, the contact to the electrode as shown by Hijzen is of higher resistivity, compared to a feature in claims 1 and 13, due to the limited contact area.

Last, when the oxide on the termination sidewall is the same as those in the active area, the depletion behavior is substantially the same at the periphery of the active region as inside the active region, resulting a device with less complex fabrication parameters and behavior.

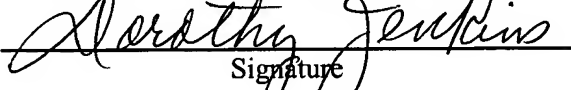
Claims 1 and 13 are, therefore, distinguishable over the art of record. Reconsideration is requested.

EXPRESS MAIL CERTIFICATE

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